REMARKS

Applicants respectfully traverse the Examiner's rejections under 35 U.S.C. §§ 112, second paragraph, and 103(a). Reconsideration of this application and prompt allowance is respectfully requested. Claims 2-20 are cancelled without prejudice. Claims 1, 22. and 23 are amended. Claims 25-34 are added to the application.

The § 112 Rejection

Claims 1 and 22 have been amended to address the Examiner's rejections. Regarding the Examiner's concern about what "lead" means for the "lead operating system kernel," Applicants respectfully direct the Examiner to ¶ 108 where lead kernels are further described. Applicants have also clarified that the lead operating system kernel "performs tasks for the distributed host as a whole" as described in ¶ 108. Applicants respectfully request the removal of the 35 U.S.C. § 112 rejection in light of the amendments and above explanation.

The § 103 Rejection

Claim 1 requires:

> modifying the operating system kernel to designate a lead operating system kernel for a distributed host, wherein the lead operating system kernel performs tasks for the distributed host as a whole

The Examiner stated that Dalton (US 2003/0172109) does not disclose the above limitation (Final Office Action, p. 4). The Examiner used Peacock (US 4,914,570) to this limitation and stated Peacock discloses "a method for process distribution and sharing in a multiprocessor system (title), comprising modify Kernel (col. 5, lines 32-44) to allow requests or tasks that cannot be handled by an application processor AP to be handled by a main processor MP (fig. 1, main processor MP, application processors APs, col. 5 lines 32-60, MP handles special tasks which cannot be done by APs); the MP handles special system functions that the APs cannot (col. 5 lines 54-60)" (Office Action, p. 4). The *modification* of the kernel cited by the Examiner is simply the copying of portions of the kernel from the main processor to the application processor. Peacock discloses "the UNIX kernel has been *modified by dividing or replicating portions of the kernel* among the MP and attached APs" (col. 5, lines 37-39) (emphasis added). This *modification* is described in Peacock as being performed by copying the

kernel from a disk to the main processor's memory and then copying from the main processor to the application processor's memory (col. 11, line 63 to col. 12, line 6).

The Examiner has failed to show "designating a lead operating system kernel for a distributed host," while the Examiner has indicated that Dalton does not show this, there is no indication in the Office Action where Peacock shows this limitation. Further, applicants can find no teaching or suggestion of this limitation in Peacock.

Further, Peacock's copying of the kernel from a main processor to an application processor does not show or suggest "the lead operating system kernel performs tasks for the distributed host as a whole" as claim 1 requires. Peacock replicates the same kernel for all the processors and simply copies the kernel from one processor to another processor (*see* col. 11, line 63 to col. 12, line 6). Applicants can find no teaching or suggestion that the "lead operating system kernel performs tasks for the distributed host as a whole" as the claim requires. While the main processor is the only processor that can perform certain system functions, Peacock only describes hardware differences from the main processor to the application processors that allow the main processor to perform these functions.

The first hardware difference, as shown in FIG. 1 and described in col. 5, lines 58-60, is that the main processor is the only processor which can access the system's disk storage units 22. The second hardware difference, is that the main processor is not connected to the faster bus that all the other processors are (see FIG. 1 and col. 6, lines 19-24). The third hardware difference, is that the main processor is the only processor connected to disk controller and two terminal ports (see col. 6, lines 21-23). Finally, the memory of main processor is setup differently as it has a process table 30, which has one row of data 38 for each user process in the system (see FIG. 1 and col. 6, lines 64-68). These hardware differences, and not kernel modifications, account for allowing "requests or tasks that cannot be handled by an application processor AP to be handled by a main processor MP" (Office Action, p. 4). Thus, while Peacock discloses a main processor that can perform certain system functions, Peacock fails to show or suggest "designat[ing] a lead operating system kernel for a distributed host, wherein the lead operating system kernel performs tasks for the distributed host as a whole" as claim 1 requires.

Dalton and Peacock Cannot be Combined

The Examiner stated that it would be obvious for one skilled in the art to combine Dalton (US 2003/0172109) and Peacock to "apply distributing application processing to a multiprocessor of Peacock, and take advantage of Peacock's main processor being able to process special functions for the process distribution system" (Office Action, p. 4-5). A person of ordinary skill in the art would not be able to combine Dalton and Peacock. Dalton discloses providing "containment" security in an operating system and discusses using protected compartments along with access control rules (see abstract). In order to provide these compartments and security features, Dalton requires "major areas of change to the base Linux kernel" (¶ 114). These changes to the kernel need to be made during the boot-up sequence (see ¶¶ 223 and 261) and the kernel must know information from the various state-tables (¶ 266) in order for Dalton to work correctly.

Specifically, Dalton's kernel would not be able to be able to perform the boot-up sequence because Peacock requires replication to occur during boot up, and for the application processors to download portions of the kernel periodically until the application processors work entirely from local memory (col. 11, line 63 to col. 12, line 37). This would not allow Dalton's modified kernel to properly load. Additionally, as a result of each processor having its own copy of the kernel, there is no way for the compartments to be organized amongst all the processors. As such, one of ordinary skill in the art would not be able to combine Dalton and Peacock as there is no solution to dealing with the problems of scaling to multiple processors.

Dalton and Lundback Cannot be Combined

The Examiner cited Lundback (US 6,912,590) in combination with Dalton to show claim 23. The Examiner stated it would be obvious for one of skill in the art to combine Lundback and Dalton "so that tags can be inherited and processes with the same tag can share workload; therefore increase efficiency by assigning tags automatically and increase security among different compartments" (Office Action, p. 7). A person of ordinary skill would not be able to combine Dalton and Lundback. As mentioned above, Dalton requires "major areas of change to the base Linux kernel" (¶ 114). These changes to the kernel need to be made during the boot-up sequence (see ¶¶ 223 and 261) and the kernel must know information from the various state-tables (¶ 266) in order for Dalton to work correctly. Lundback makes no mention of a kernel so

there is no clear way to modify Lundback's processing cluster to run Dalton's modified kernel. Further, there is no disclosure about how to tag the packets that could arrive at any one of the processors of Lundback, which is necessary for Dalton's operation. As described above, Dalton has problems scaling to multiple processors that both Lundback and Peacock contain.

For at least forgoing reasons, applicants respectfully request that the Examiner remove the rejections from independent claims 1 and 23. Applicants also note that for at least the same reasons that independent claims 1 and 23 are allowable, the claims that depend from claims 1 and 23 are allowable as well. Applicants respectfully request that the Examiner place the application in a condition for allowance.

Authorization

The Commissioner is hereby authorized to charge any additional fees, which may be required for this amendment, or credit any overpayment to Deposit Account No. 08-0219.

In the event that an Extension of Time is required, or which may be required in addition to that requested in a petition for an Extension of Time, the Commissioner is requested to grant a petition for that Extension of Time which is required to make this response timely and is hereby authorized to charge any fee for such an Extension of Time or credit any overpayment for an Extension of Time to Deposit Account No. 08-0219.

Respectfully submitted,

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